

## WHAT IS CLAIMED IS:

1. A human papillomavirus (HPV) pseudovirion comprising a virus-like particle (VLP) covalently linked to a reporter gene construct.
2. A pseudovirion according to Claim 1 wherein the HPV is selected from the group consisting of: HPV6a, HPV6b, HPV11, HPV16, HPV18, HPV31, HPV33, HPV35, HPV42, HPV43, HPV44, HPV45, HPV51, HPV52 and HPV56.
3. A pseudovirion according to Claim 1 wherein the VLP is comprised of L1 or L1+L2 protein.
4. A pseudovirion according to Claim 3 wherein the reporter gene construct is selected from the group consisting of: beta-lactamase gene constructs, beta galactosidase gene constructs, luciferase gene constructs and green fluorescent protein gene constructs.
5. A pseudovirion comprising a HPV VLP, a heterobifunctional crosslinker and a reporter gene construct.
6. A pseudovirion according to Claim 5 wherein the molar ratio of the reporter gene construct to VLP is from about 0.1 to 50.
7. A pseudovirion according to Claim 5, wherein the molar ratio of the reporter gene construct to VLP is about 1 to 5.
8. A pseudovirion according to Claim 5 wherein the molar ratio of the reporter gene construct to VLP is about 1 to 1.
9. An assay to determine if anti-HPV neutralizing antibodies are present in a sample, comprising the steps of:
  - a) contacting pseudovirions, a cell culture susceptible of being infected by pseudovirions, and the sample; and
  - b) determining if cell uptake of pseudovirions is inhibited, wherein inhibition of uptake is indicative of anti-HPV neutralizing antibodies in the sample.

10. An assay according to Claim 9 wherein the sample comprises serum from a human.
11. An assay according to Claim 10 further comprising the step of comparing the results to those obtained using a control assay.
12. An assay according to Claim 9 wherein the pseudovirions comprise a beta-lactamase gene construct.